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Next Generation Space Telescope

NGST

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NGST Flight Investigations AO 01-OSS-05 Preproposal Conference

L'Enfant Plaza Hotel, Washington, DC

Background, Investigation Classes, Evaluation Criteria

November 30, 2001
Eric P. Smith

Conference Information (1)

- All information provided by NASA is openly available to everyone, even if not in attendance, via online presentations and minutes.
- Questions may be submitted in writing anonymously; regardless, questions are posted without attribution
- NASA reserves the right to defer the answers and questions asked during the conference for posting on the NGST AO Additional Information Homepage: http://centauri.larc.nasa.gov/ngst/
- Answers to ALL written questions submitted during today's conference will be posted to above URL by December 21, 2001
- Answers to all questions received before January 4,2002, along with any necessary changes to the AO will be posted to the above URL

Conference Information (2)

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- NASA does not reveal conference attendee list to the general public
- NASA will discuss all aspects of the proposal review and selection process, but as a matter of policy, does not reveal the names of its reviewers
- NPRS will be available to discuss electronic submittal; dtripp@hq.nasa.gov
- Written questions are allowed until January 4, 2002 (POC: Eric P. Smith, Code SZ or Eric.Smith@hq.nasa.gov, or fax (202) 358-3096

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What NASA is Soliciting?

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- **Four types of science investigations**
  - **Those requiring the design, development, and delivery of a Near-IR Camera for the reference telescope**
  - **Those associated with participation in the development, integration, and test of the facility Mid-IR instrument**
  - **Those using the reference telescope and instruments and offering specific participation in key program elements**
  - **Those using the reference telescope and instruments**

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NGST Science Objectives

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- **Primary goal: advance the understanding of the formation of the first stars and galaxies**
- **Other goals outlined in AO section 2 and documented in AO Library documents;**
  - ***Visiting a Time When Galaxies Were Young***
  - ***Scientific Objectives & Capabilities of NGST***

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NGST Investigation Classes

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Proposal Category	Deliverables	SWG Member	NGST Program Interface	Approx. GTO time (hrs)	Expected PI effort (FTE)†	Number selected via this AO*
NIRCam Principal Investigator	Fully qualified flight hardware, calibration and commissioning plans, analysis tools, and documentation	Yes	ISIM Project	900	1.0	1
Facility Scientist	None	Yes	SWG	260	0.5	1
Telescope Scientist	None	Yes	Observatory Project	210	0.5	1
MIRI Science Lead	MIRI teaming plan, algorithms for instrument operation, calibration plans, commissioning plans, analysis tools, and documentation	Yes	ISIM Project	210	**	1
MIRI Science Team Member	None	No	MIRI Science Team	60	0.25	Up to 3
Interdisciplinary Scientist	None	Yes	SWG	110	0.25	4

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Evaluation Criteria (5)

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- **NIRCam PI**
  - Science Merit & Relevance to Mission Objectives(40%)
  - Technical Merit & Prob. Of Success (30%)
  - Cost Risk and Feasibility of Implementation Plan (30%)
- **MIRI Team Lead**
  - Science Merit (40%)
  - Technical Merit (30%)
  - Suitability for Team Leader Position (30%)
- **MIRI Team Member**
  - Science Merit (50%)
  - Technical Merit (10%)
  - Suitability for Team Membership (40%)
- **Telescope and Facility Scientists**
  - Science Merit (40%)
  - Feasibility and Probability of Success of Science Investigation (25%)
  - Suitability for Position (35%)
- **Interdisciplinary Scientist**
  - Science Merit (60%)
  - Feasibility and Probability (40%)

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Science Evaluation Process

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- **Science Evaluators are:**
  - **Best (non-conflicted academic, civil servant, contractor, consultant and other Government personnel available to support the review;**
  - **Peers in the areas of expertise they evaluate**
- **Science Findings are the Consensus of the entire Science Panel**
  - **Every proposal is evaluated by multiple reviewers with a mixture of discipline expertise**
  - **All proposals and findings discussed by the entire Science Panel**
  - **Final ratings are agree to by the entire Science Panel**

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Important URLs

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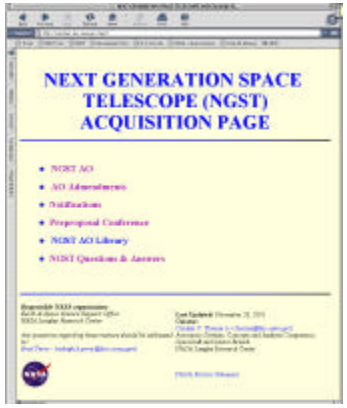
AO Library (http://www.ngst.nasa.gov/cgi-bin/doc?Id=871)

AO Solicitation Page (http://research.hq.nasa.gov/code_s/open.cfm)



AO Acquisition Page (http://centauri.larc.nasa.gov/ngst/)

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Backup charts

Criteria Definitions (1)

- **Scientific Merit and Relevance to Mission Objectives**
  - **What is the intrinsic merit of the proposed investigation?**
  - **How well does the investigation fill important gaps in knowledge and/or provide for fundamental progress in areas relevant to NGST?**
  - **The merit of the minimum science investigation with a descoped instrument will be evaluated (NIRCam only)**

Criteria Definitions (2)

- **Technical Merit and Probability of Success**
  - Can the proposed investigation approach (measurement objectives, data analysis, etc.) be expected to achieve the proposed scientific goals and objectives?
  - Does the science team have the appropriate expertise, experience and organizational structure to successfully complete the proposed investigation?
  - Does the proposed (or reference) instrumentation support the measurement objectives of the investigation (appropriate type of data with necessary resolution, dynamic range, sensitivity, SNR, etc.)
  - Will the volume of data returned be sufficient to complete the investigation?
  - Is the technical margin sufficient?
  - Resiliency: In the event of development problems, will the proposed descope plan permit “graceful degradation”?

Criteria Definitions (3)

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- **Cost Risk and Feasibility of Implementation Plan**
  - **Is the cost estimate well founded, and is the approach to cost control sufficient?**
  - **Are the proposed risk levels and schedules (and associated margins) sufficient?**
  - **Are the proposed management plan and team capable of getting the job done on schedule and within cost?**

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Criteria Definitions (4)

- **Suitability for "X"**
  - **proposed plans for specific SWG participation (MIRI Team Lead, TS, FS) will be evaluated for likelihood of success**
  - **Assessment of specific talents, experience and commitment proposers offers**

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